

Name _____

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

Solve the problem.

- 1) Assume that a watermelon dropped from a tall building falls $y = 16t^2$ ft in t sec. Find the watermelon's average speed during the first 6 sec of fall.

- 2) Assume that a watermelon dropped from a tall building falls $y = 16t^2$ ft in t sec. Find the watermelon's speed at the instant $t = 6$ sec.

Determine the limit by substitution.

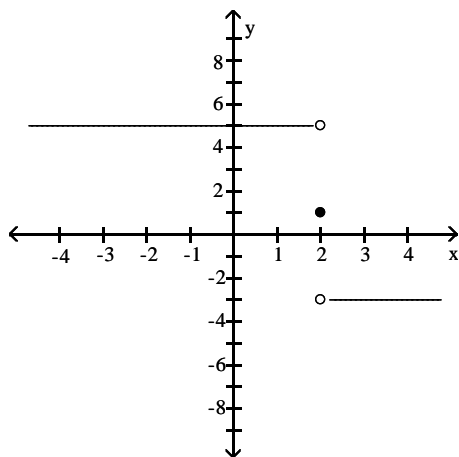
3) $\lim_{x \rightarrow 0} \frac{x^3 - 6x + 8}{x - 2}$

Determine the limit algebraically, if it exists.

4) $\lim_{x \rightarrow -7} \frac{x^2 + 11x + 28}{x + 7}$

Determine the limit graphically, if it exists.

- 5) Find $\lim_{x \rightarrow 2^-} f(x)$ and $\lim_{x \rightarrow 2^+} f(x)$.



Answer Key

Testname: FRF SEPT 17 LIMITS

1) 96 ft/sec

Objective: (2.1) Average and Instantaneous Speed

2) 192 ft/sec

Objective: (2.1) Average and Instantaneous Speed

3) -4

Objective: (2.1) Determine Limit by Substitution

4) -3

Objective: (2.1) Determine Limit Algebraically

5) 5; -3

Objective: (2.1) Determine Limit Graphically